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| 10/733,398 | 12/12/2003 | Gunter Kohler | Q78757 | 9135 |

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| EXAMINER | |
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| HERRERA, DIEGO D | |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/733,398 | KOHLER ET AL. | |
| | Examiner | Art Unit | |
| | Diego Herrera | 2617 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over (), and in view of Soliman et al. (US patent 6111857).

Consider claim1, Green, Jr. shows and discloses a method of determining a quality measure of a position measurement method for a cellular telecommunication network, the method (Abstract, col. 7, lines: 34-44, col. 3, lines: 44-46) comprising the steps of:
Identification of a first measurement area having at least a predefined number of neighboring first cells, the first measurement area belonging to a selected class of measurement areas (Fig. 3, col. 4, lines: 66-67, col. 5, lines: 1-8).
Defining of first sub-areas in the first measurement area by applying a predefined grid on the first measurement area (Fig. 3), however, Green does not specifically teach selecting within an area specific points as desired, nevertheless, Soliman et al. teaches wireless network panning tool to select areas for measurements of parameters (title, abstract, fig. 1-3, col. 6 lines: 28-31, 40-45, 51-55; Soliman teaches the use of a selection of area)
Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to specifically include the selection of an area and specific points as desired as taught by Soliman et al. for the purposes of having a very effective network system.
Performing position measurements by means of the position measurement method in at least a sub-set of the first sub-areas (col. 5, lines: 34-48),
Determining of measurement errors for the position measurements (col. 7, lines: 34-44),

Determining of the quality measure based on the measurement errors (col. 8, lines: 55-65).

Consider claim 2, as applied to claim 1 above, Green, Jr. shows and discloses a method whereby the first class is defined by a minimum first size of the first cells and further comprising (Fig. 3):

Identification of a second measurement area having at least the predefined number of neighboring second cells, each one of the second cells having a maximum second size, whereby the second size is smaller than the first size (col. 8, lines: 59-67, note: the reference point out a different configuration for an urban area which is interpreted by the examiner to mean smaller and higher density of user and cells concentrated in that environment. This would imply that there would be a bigger area {first class} and a smaller area {second class}),

Defining of second sub-areas in the second measurement area by applying a second predefined grid on the second measurement area (col. 5, lines: 34-48),

Performing position measurements by means of the position measurement method in at least a sub-set of the second sub-areas (col. 7, lines: 34-44). However, Green does not specifically discloses a method of selecting specific points in areas, nevertheless, Soliman et al. teaches selecting areas in wireless networks (col. 5 lines: 60-67, Soliman et al. teaches the ability of selecting geographical areas and measuring different parameters)

Claims 3 & 11-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Green, Jr. (U.S. Patent # 5,926,133), in view of Soliman et al., and in view of Spirito M A et al. (Preliminary experimental results of a GSM mobile phones positioning system based timing advance).

Regarding claims 3 & 11-12, and as applied to claim 2 above, Green, Jr. discloses the claimed invention except selecting of at least a predefined fraction of the first and second sub-areas for the subset and performing a specified minimum number of position measurements per sub-area and each one of the measurement routes having measurement route segments which are about evenly distributed in the respective measurement area.

However, Spirito M A et al. discloses selecting of at least a predefined fraction of the first and second sub-areas (Paragraphs 10-11, 'The field trial was carried on in rural {first class} and urban {second class}/suburban areas...Two regions {first sub-areas} in a rural environment and two regions {second sub-areas} in an urban environment') for the subset and performing a specified minimum number of position measurements per sub-area (Paragraphs 20-23, 'This analysis aids the design of the EKF, in which the model of the distance measurements obtained from TAs is defned as the correct MS-BTS distance plus a white Gaussian sequence...to completely describe the Gaussian measurement error model...').

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the system Green, Jr. for having at least a predefined fraction of the first and second sub-areas for the subset and performing a

specified minimum number of position measurements per sub-areas by adding Spirito M A et al. for the purpose of assessing the measurements' reliability (Paragraph 34).

Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Green, Jr., and in view of Soliman et al., and in view of Sendonaris et al. (U.S. Patent # 6,141,552).

Regarding claim 4, and as applied to claim 2 above, Green, Jr. discloses the claimed invention except identification of at least an additional third measurement area having the predefined number of neighboring third cells, the third cells having at least a third intermediary size between the first size and the second size, defining of third sub-areas in the third measurement area by applying a third predefined grid on the third measurement area, providing a measurement route for each one of the measurement areas, each one of the measurement routes having a length of a multiple of the square root of the respective measurement area.

However, Sendonaris et al. discloses identification of at least an additional third measurement area having the predefined number of neighboring third cells (Fig. 2), the third cells having at least a third intermediary size between the first size and the second size (Fig. 2, col. 3, lines: 58-65), defining of third sub-areas in the third measurement area by applying a third predefined grid on the third measurement area, providing a measurement route for each one of the measurement areas (Fig. 7, col. 8, lines: 25-32), each one of the measurement routes having a length of a multiple of the square root of the respective measurement area.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

of the invention was made to modify the system of Green for identification of at least an additional third measurement area having the predefined number of neighboring third cells, the third cells having at least a third intermediary size between the first size and the second size, defining of third sub-areas in the third measurement area by applying a third predefined grid on the third measurement area, providing a measurement route for each one of the measurement areas, each one of the measurement routes having a length of a multiple of the square root of the respective measurement area by adding Sendonaris et al. for the purpose of circumscribing areas that are of intermediary size of that of the first and second class areas and leaving no gaps in the network between the first and second class areas.

Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Green, Jr. in view of Sendonaris as applied to claim 4 above and further in view of Spirito M A et al. (Preliminary experimental results of a GSM mobile phones positioning system based timing advance).

Regarding claim 5, and as applied to claim 4 above, Green as modified by Sendonaris does not disclose each one of the measurement routes having measurement route segments that are about evenly distributed in the respective measurement area (Paragraphs 12-18, note: reference mentions distances and measurements of routes). However, Spirito M A et al. disclose that each one of the measurement routes having measurement route segments which are about evenly distributed in the respective measurement area (Paragraphs 12-18, note: reference mentions distances and

measurements of routes for the different size measurement areas).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the system by the combination of Green/Sendonaris to further modify the method each one of the measurement routes having measurement route segments which are about evenly distributed in the respective measurement area by adding Spirito M A et al. for the purpose of validity of position information (Paragraphs 21-23).

Claim 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green, in view of Soliman et al., in view of Sendonaris, and further in view of Walczak et al. (U.S. Patent Application Publication # 20020098851).

Regarding claim 6, and as applied to claim 4 above, Green as modified by Sendonaris does not disclose the position measurements being performed at equidistant points of time or distance while traveling along the measurement route.

However, Walczak et al. discloses the position measurements being performed at equidistant points of time or distance while traveling along the measurement route (Paragraphs 27 and 43, note: ...a time attribute, for example the time of acquisition of the signal, is associated with the location or position or speed or velocity information derived from the sampled signals or with the signal data from which the information is derived...or is a function of, an interval of time that passes between generation of the reference location fix and the location fix for which the validity determination is desired).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

of the invention was made to modify the method of the combination of Green/Sendonaris for each one of the measurement routes having measurement route segments which are about evenly distributed in the respective measurement area by adding Walczak et al. for the purpose of a more accurate and valid measurement of position (Paragraphs 27 and 43).

Regarding claim 7, and as applied to claim 4 above, Green and Sendonaris as modified by Walczak do not disclose providing a speed profile for performing of the position measurements when traveling along the measurement route.
However, Walczak et al. further modifies providing a speed profile for performing of the position measurements when traveling along the measurement route (Paragraphs 26 and 44)
Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the method of the combination Green/Sendonaris for providing a speed profile for performing of the position measurements when traveling along the measurement route by adding Walczak et al. for the purpose of gathering information of the mobile station for further processing (Paragraphs 26).

Claims 8, 9 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Sendonaris et al., in view of Soliman et al. and in view of Tayloe et al. (U.S. Patent # 5,095,500).

Regarding claims 8 & 9, Sendonaris disclose neighboring cells of different sizes except a computer program stored in a computer readable medium, for planning of position measurements for the purpose of determining a quality measure of a position measurement method for a cellular telecommunication network, comprising program code/instruction for performing the steps of: accessing of cartographic and network topology data for the cellular telecommunication network, identifcation of a first measurement area having at least a predefined number of neighboring first cells, the first cells having at least a first size, the identification being performed on the basis of the cartographic and/or network topology data, defining of first sub-areas in the first measurement area by applying a predefined grid on the first measurement area, identification of a second measurement area having at least a predefined number of neighboring second cells, each one of the second cells having a maximum second size, whereby the second size is smaller than the first size, the identification being performed on the basis of the cartographic and/or network topology data, defining of second sub-areas in the second measurement area by applying a predefined grid on the second measurement area, providing a measurement plan for the first and second measurement areas.

However, Tayloe et al. discloses and shows a computer program stored in a computer readable medium, for planning of position measurements for the purpose of determining a quality measure of a position measurement method for a cellular telecommunication network, comprising program code/instruction for performing the steps of: accessing of cartographic and network topology data for the cellular telecommunication network (col.

2, lines: 39-41), identification of a first measurement area having at least a predefined number of neighboring first cells (Fig. 2), the first cells having at least a first size, the identification being performed on the basis of the cartographic and/or network topology data, defining of first sub-areas in the first measurement area by applying a predefined grid on the first measurement area (Fig. 2), identification of a second measurement area having at least a predefined number of neighboring second cells, each one of the second cells having a maximum second size, whereby the second size is smaller than the first size, the identification being performed on the basis of the cartographic and/or network topology data, defining of second sub-areas in the second measurement area by applying a predefined grid on the second measurement area (Fig. 4), providing a measurement plan for the first and second measurement areas (col. 4, lines: 62-68, col. 5, lines: 1-11, note: monitoring is considered as measurement plan).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the method of Sendonaris to have a computer program stored in a computer readable medium, for planning of position measurements for the purpose of determining a quality measure of a position measurement method for a cellular telecommunication network, comprising program code/instruction for performing the steps of: accessing of cartographic and network topology data for the cellular telecommunication network (col. 2, lines: 39-41), identification of a first measurement area having at least a predefined number of neighboring first cells (Fig. 2), the first cells having at least a first size, the identification being performed on the basis of the cartographic and/or network topology data, defining of first sub-areas in the

first measurement area by applying a predefined grid on the first measurement area (Fig. 2), identification of a second measurement area having at least a predefined number of neighboring second cells, each one of the second cells having a maximum second size, whereby the second size is smaller than the first size, the identification being performed on the basis of the cartographic and/or network topology data, defining of second sub-areas in the second measurement area by applying a predefined grid on the second measurement area (Fig. 4), providing a measurement plan for the first and second measurement areas (col. 4, lines: 62-68, col. 5, lines: 1-11, note: monitoring is considered as measurement plan) for by adding Tayloe et al. for the purpose of effectively diagnose coverage deficiencies in different size areas and take the necessary corrective action for the measurement plan,

However, the combinations do not discloses specifically wherein a sub-area is where a separate position measurement is to be performed, nevertheless, Soliman et al. teaches the ability to set sub-area is where a separate position measurement is to be performed (col. 5 lines: 60-67, col. 6 lines: 20-25, 30-33, 46-50, Soliman et al. teaches the ability to choose an area). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to specifically include the sub-area is where a separate position measurement is to be performed, as taught by Soliman et al. for the purposes of having a precise measurements of an area of interest.

Regarding claim 10, and as applied to claim 9 above, Tayloe et al. inherently discloses and shows a computer system for planning and/or optimization of a cellular

telecommunication network (col. 2, lines: 39-41), the computer system comprising: means for providing cartographic and network topology data of the cellular telecommunication network (col. 2, lines: 39-41), means for identification of a first measurement area having at least a predefined number of neighboring first cells, the first cells having at least a first size the identification being performed on the basis of the cartographic and/or network topology data, means for defining of first sub-areas in the first measurement area by applying a predefined grid on the first measurement area (Fig. 2), means for identification of a second measurement area having at least the predefined number of neighboring second cells, each one of the second cells having a maximum second size, whereby the second size is smaller than the first size, the identification being performed on the basis of the cartographic and/or topology data, means for defining of second sub-areas in the second measurement area by applying a second predefined grid on the second measurement area (Fig. 4), means for providing a measurement plan for the first and second measurement areas (col. 4, lines: 62-68, col. 5, lines: 1-11, note: monitoring is considered as the measurement plan by the examiner), However, the combinations do not discloses specifically wherein a sub-area is where a separate position measurement is to be performed, nevertheless, Soliman et al. teaches the ability to set sub-area is where a separate position measurement is to be performed (col. 5 lines: 60-67, col. 6 lines: 20-25, 30-33, 46-50, Soliman et al. teaches the ability to choose an area). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to specifically include the

sub-area is where a separate position measurement is to be performed, as taught by Soliman et al. for the purposes of having a precise measurements of an area of interest.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diego Herrera whose telephone number is (571) 272-0907. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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